

**What is claimed is:**

- sub B'*
- 1 1. A method of controlling call admission in a communications  
2 network, comprising:  
3 calculating a load level as a function of at least one of a change in  
4 power measurements or a change in number of users values; and  
5 controlling call admission based on the calculated load level.
- low power with threshold*

- sub A'*
- 1 2. The method of claim 1, wherein said calculating step utilizes a first  
2 load level estimating method to calculate an initial load level, and utilizes  
3 at least a second load level estimating method to recursively calculate  
4 updated load levels.

- 1 3. The method of claim 1, wherein said calculating step estimates load  
2 level as a function of a change in power measurements and a change in  
3 number of users values.

- 1 4. The method of claim 3, wherein said calculating step estimates load  
2 level,  $L_{new}$ , by solving:

$$L_{new}(N_{new}, P_{new}) = \frac{N_{new} \times (P_{new} - P_{old})}{N_{new} \times (P_{new} - P_{old}) + P_{old} \times (N_{new} - N_{old})},$$

- 5 where  $N_{new}$  and  $N_{old}$  are current and previous number of users values  
6 respectively, and  $P_{new}$  and  $P_{old}$  are current and previous power  
7 measurements respectively.

- sub A'*
- 1 5. The method of claim 1, wherein said calculating step recursively  
2 updates load level as a function of a change in number of users values.

1 6. The method of claim 1, wherein said calculating step recursively  
2 updates load level as a function of a change in power measurements.

1 7. The method of claim 5, wherein said calculating step estimates load  
2 level,  $L_{new}$ , by solving:

3 
$$L_{new} = L_{old} \times \frac{N_{new}}{N_{old}},$$

4 where  $L_{old}$  is a previously calculated load level, and  $N_{new}$  and  $N_{old}$  are  
5 current and previous number of users values respectively.

1 8. The method of claim 6, wherein said calculating step estimates load  
2 level,  $L_{new}$ , by solving:

3  
4 
$$L_{new} = 1 - \frac{P_{old}}{P_{new}} \times (1 - L_{old}),$$

5 where  $L_{old}$  is a previously calculated load level, and  $P_{new}$  and  $P_{old}$  are  
6 current and previous power measurements respectively.

Sub 9. 1 9. The method of claim 1, further comprising:  
2 verifying a calculated load level before using the calculated load  
3 level in said controlling step.

1 10. The method of claim 9, wherein said verifying step calculates an  
2 estimated power measurement,  $P_{new'}$ , based on the calculated load level,  
3  $L_{new}$ , by solving:

4  
5 
$$P_{new'} = \frac{P_{old}(1 - L_{old})}{(1 - L_{new})},$$

6 where  $P_{old}$  is a previous power measurement and  $L_{old}$  is a previously  
7 calculated load level, said verifying step comparing  $P_{new'}$  with an actual

8 power measurement,  $P_{new}$ , to determine whether  $L_{new}$  is reasonably  
9 accurate.

1 11. The method of claim 10, wherein, when said verifying step indicates  
2 that the  $P_{new'}$  is not sufficiently close to  $P_{new}$ , said calculating step  
3 calculates load level by solving:

4 
$$L_{new} = 1 - \frac{P_{old}}{P_{new}} \times (1 - L_{old}).$$

1 12. A system of controlling call admissions in a communications  
2 network, comprising:

3 load calculating means for calculating a load level as a function of  
4 at least one of a change in power measurements or a change in number of  
5 users values; and

6 control means for controlling call admission based on the calculated  
7 load level.

5624 13. The system of claim 12, wherein said load calculating means  
2 utilizes a first load level estimating technique to calculate an initial load  
3 level, and utilizes at least a second load level estimating technique to  
4 recursively calculate updated load levels.

1 14. The system of claim 12, wherein said load calculating means  
2 estimates load level as a function of a change in power measurements and  
3 a change in number of users values.

1 15. The system of claim 14, wherein said load calculating means  
2 estimates load level,  $L_{new}$ , by solving:

3  
4 
$$L_{new}(N_{new}, P_{new}) = \frac{N_{new} \times (P_{new} - P_{old})}{N_{new} \times (P_{new} - P_{old}) + P_{old} \times (N_{new} - N_{old})},$$

5 where  $N_{new}$  and  $N_{old}$  are current and previous number of users values  
6 respectively, and  $P_{new}$  and  $P_{old}$  are current and previous power  
7 measurements respectively.

Sub 9<sup>5</sup> 16. The system of claim 12, wherein said load calculating means  
2 recursively updates load level as a function of a change in number of  
3 users values.

1 17. The system of claim 12, wherein said load calculating means  
2 recursively updates load level as a function of a change in power  
3 measurements.

1 18. The system of claim 16, wherein said load calculating means  
2 estimates load level,  $L_{new}$ , by solving:  
3

$$L_{new} = L_{old} \times \frac{N_{new}}{N_{old}},$$

5 where  $L_{old}$  is a previously calculated load level, and  $N_{new}$  and  $N_{old}$  are  
6 current and previous number of users values respectively.

1 19. The system of claim 17, wherein said load calculating means  
2 estimates load level,  $L_{new}$ , by solving:  
3

$$L_{new} = 1 - \frac{P_{old}}{P_{new}} \times (1 - L_{old}),$$

5 where  $L_{old}$  is a previously calculated load level, and  $P_{new}$  and  $P_{old}$  are  
6 current and previous received power measurements respectively.

Sub 9<sup>6</sup> 20. The system of claim 12, further comprising:  
2 verifying means for verifying a calculated load level before said  
3 control means uses the calculated load level.

1 21. The system of claim 20, wherein said verifying means calculates an  
2 estimated power measurement,  $P_{new'}$ , based on the calculated load level,  
3  $L_{new}$ , by solving:

$$P_{new'} = \frac{P_{old}(1 - L_{old})}{(1 - L_{new})},$$

6 where  $P_{old}$  is a previous power measurement and  $L_{old}$  is a previously  
7 calculated load level, said verifying means comparing  $P_{new'}$  with an actual  
8 power measurement  $P_{new}$  to determine whether  $L_{new}$  is reasonably  
9 accurate.

1 22. The system of claim 21, wherein, when said verifying means  
2 indicates that the  $P_{new'}$  is not sufficiently close to  $P_{new}$ , said calculating  
3 means calculates load level by solving:

$$L_{new} = 1 - \frac{P_{old}}{P_{new}} \times (1 - L_{old}).$$

1 23. The system of claim 12, further comprising:  
2 input means for receiving power measurements and number of user  
3 values.

add a<sup>7</sup>